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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/137,198	08/20/1998	NORMAN J. BEAMISH	ROKWELL.039A	2615

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KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER
KUMAR, PANKAJ

ART UNIT	PAPER NUMBER
2631	13

DATE MAILED: 06/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/137,198	BEAMISH ET AL.	
	Examiner	Art Unit	
	Pankaj Kumar	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 April 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new grounds of rejection.

Response to Amendment

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-12, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sumner in view of Beard USPN 6,434,187.

4. As per claim 1, Sumner in view of Beard teach a dual mode wireless transceiver comprising: a direct sequence spread spectrum transmitter portion (Sumner fig. 2: 102); a frequency hopping spread spectrum transmitter portion (Sumner fig. 2: 112); a mode selection circuit coupled to said direct sequence spread spectrum transmission portion and to said frequency hopping spread spectrum transmission portion to selectively activate said direct sequence spread spectrum portion when in a direct sequence spread spectrum transmission mode with a first data transmission rate and to activate said frequency hopping spread spectrum transmission portion when in a frequency hopping spread spectrum transmission mode (Sumner fig. 2: 126 adjusts the power. If 126 always has P1 high and all of the other PNs low, then this would be a DSSS system. If 126 changes power in all of the PNs then this would indicate a FHSS system) with a data transmission rate that is greater than said first data transmission rate (Sumner does not have FHSS data rate being faster than DSSS data rate. But Beard USPN 6,434,187 does teach this – paragraph 7: "FHSS typically enables high data rates to be achieved without requiring the high-speed logic that an equivalent DSSS system would require." It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to include FHSS data rate being faster than DSSS data rate as taught in Beard. One would be motivated to do so for efficiency.); and a receiver portion capable of receiving and demodulating both direct sequence spread spectrum modulated signals and frequency hopping spread spectrum modulated signals (Sumner fig. 5, 6).

5. As per claim 2, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 1, wherein said direct sequence spread spectrum transmitter portion (Sumner fig. 2: 102) comprises a spreading code generator (Sumner fig. 2: 106) selectively mixed with an input signal (Sumner fig. 2: 108).

6. As per claim 3, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 2, further comprising a frequency generator (Sumner fig. 2: 120) and wherein said frequency hopping spread spectrum transmitter portion further includes a hopping sequence generator (Sumner fig. 2: 126) selectively coupled to said frequency generator (Sumner fig. 2: coupled through PNs and power adjust 124).

7. As per claim 4, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 2, further comprising a spreading code mixer (Sumner fig. 2: 110) for mixing the output of said spreading code generator and the input signal.

8. As per claim 5, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 4, further comprising a modulating mixer coupled to receive the output of said spreading code mixer and said frequency generator (Sumner fig. 2: 122 receives the output of 102 and FNs).

9. As per claim 6, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 1, wherein said receiver portion selectively receives a spreading code from said direct sequence spread spectrum transmitter portion (Sumner fig. 4 "The output 334 of the multiplier is coupled to the input 338 of a conventional spreading code tracker 318 for generating a phase control signal responsive to the despread source data at the output 344 of the spreading code tracker. The output 344 of the spreading code tracker 318 is coupled to a phase control input 346 of the spreading code generator 320 for supplying the phase control signal thereto to keep the spreading code sequence generated by the spreading code generator 320 synchronized with the demodulated DSSS signal."; thus the receiver receives spreading code in the form of phase data).

10. As per claim 7, Sumner in view of Beard teach the dual mode wireless transceiver of Claim 1, wherein said receiver portion selectively receives a demodulation frequency signal from said frequency hopping spread spectrum transmitter portion (Sumner fig. 4 "The demodulated DSSS signal is coupled to the input 336 of a conventional carrier tracker 312 for producing a frequency control signal at the output 340 of the carrier tracker 312. A frequency trimming input 342 of the carrier generator 314 is coupled to the output 340 of the carrier tracker 312 for receiving the frequency control signal, thereby maintaining the carrier generator on frequency using well-known techniques."; thus the carrier tracker selectively receives a demodulation frequency signal by receiving the frequency control signal which was sent via the hopping transmitter portion).

11. As per claim 8, Sumner in view of Beard teach a frequency generator, spreading code mixer, spreading code generator ..., hopping sequence ..., modulating mixer ..., (discussed above up to here; remainder also discussed above but repeated for clarity), a spread spectrum control signal system including a switch to couple said spreading code mixer in a first transmission mode with a first transmission rate and to couple said hopping sequence to said frequency generator in a second transmission mode (Sumner fig. 2: 126 adjusts the power. If 126 always has P1 high and all of the other PNs low, then this would be a DSSS system. If 126 changes power in all of the PNs then this would indicate a FHSS system) with a transmission rate greater than said first transmission rate (Sumner does not have FHSS data rate being faster than DSSS data rate. But Beard USPN 6,434,187 does teach this – paragraph 7: "FHSS typically enables high data rates to be achieved without requiring the high-speed logic that an equivalent DSSS system would require." It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to include FHSS data rate being faster than DSSS data rate as taught in Beard. One would be motivated to do so for efficiency.); and a demodulation portion coupled to receive the output of said frequency generator (Sumner fig. 5, 6).

12. Claims 9 to 10 have been discussed above in respect to other claims.

13. As per claim 11, Sumner in view of Beard teach the dual mode wireless transceiver of claim 8, wherein said a spreading code mixer is a digital mixer (Sumner "It will be appreciated that, alternatively, the power hopping sequence generator 126 can generate a plurality of digital values on the hop sequence outputs P.sub.1 -P.sub.N for controlling the power adjuster 116."; "sequence"; since a digital value is out from the power hopper, a digital value is input into power adjust 124 which can be considered part of mixer 122 and thus the mixer is digital).

14. As per claim 12, Sumner in view of Beard teach the dual mode wireless transceiver of claim 8, wherein said frequency generator is a phase locked loop (inherent since the frequency's in the individual frequency generators should not change for a robust system, the phases must be locked with a PLL).

15. As per claim 14, Sumner in view of Beard teach a cordless telephone (Sumner Field of Invention "This invention relates in general to radio communication systems ... ") dual mode (Sumner Title " ... transmitting and receiving ...") wireless transceiver comprising: a direct sequence spread spectrum transmitter means for modulating an input signal as a direct sequence spread spectrum signal; a frequency hopping spread spectrum transmitter means for modulating the input signal as a frequency hopping spread spectrum signal; a mode selection ~~means~~ switch coupled to said direct sequence spread spectrum transmitter means and to said frequency hopping spread spectrum transmitter means for selecting either said direct sequence spread spectrum transmitter means to transmit said input signal (Sumner does not teach transmitting said input signal; Sumner teaches transmitting a signal derived from said input signal via other components. It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to teach transmitting said input signal since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.) as a direct sequence spread spectrum signal with a first transmission rate (Sumner: DSSS signal is being transmitted using a number of interpretations including the interpretation that the signal is going from one component to another) or said frequency hopping spread spectrum transmitter means to transmit said input signal (Sumner does not teach transmitting said input signal; Sumner teaches transmitting a signal derived from said input signal via other components. It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to teach transmitting said input signal since it has been held that rearranging parts of an invention involves only routine skill in the art. In re Japikse, 86 USPQ 70.) as a frequency hopping spread spectrum signal (Sumner: FHSS signal is being transmitted using a number of interpretations

including the interpretation that the signal is going from one component to another) with a transmission rate greater than said first transmission rate (Sumner does not have FHSS data rate being faster than DSSS data rate. But Beard USPN 6,434,187 does teach this – paragraph 7: "FHSS typically enables high data rates to be achieved without requiring the high-speed logic that an equivalent DSSS system would require." It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to include FHSS data rate being faster than DSSS data rate as taught in Beard. One would be motivated to do so for efficiency.); and a receiver capable of receiving and demodulating both direct sequence spread spectrum modulated signals and frequency hopping spread spectrum modulated signals (remainder discussed above in respect to other claims).

16. Claims 15 to 19 have been discussed above in respect to other claims.

17. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sumner in view of Beard USPN 6,434,187 and further in view of Griffis USPN 4470070.

18. As per claim 13, Sumner in view of Beard teach the dual mode wireless transceiver of claim 8. What Sumner in view of Beard does not teach is wherein the phase locked loop includes a voltage controlled oscillator, a lowpass filter and a frequency mixer/phase detector. What Griffis teaches is wherein the phase locked loop includes a voltage controlled oscillator (Griffis fig. 1: 54), a lowpass filter (Griffis fig. 1: 56) and a frequency mixer/phase detector (Griffis fig. 1: 52). It would have been obvious to one skilled in the art at the time of the invention to modify Sumner to include the PLL components of Griffis. One would be motivated to do so since the frequency's in the individual frequency generators should not change for a robust system, the phases must be locked and Griffis teaches a standard way of doing so.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pankaj Kumar whose telephone number is (703) 305-0194. The examiner can normally be reached on Monday through Thursday after 8AM to after 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (703) 305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

PK
June 5, 2003

CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 6/9/03